

U.S. Patent Application Serial No. **10/627,759**  
Amendment filed December 5, 2005  
Reply to OA dated August 5, 2005

**REMARKS:**

Claims 1-5 are currently being examined, of which claim 4 has been amended herein.

Applicant and Applicant's attorney thank Examiner Paik for the interview courteously granted October 25, 2005. The special attention the Examiner paid to the instant application is noted with appreciation. Items discussed during the interview include: claims as filed May 4, 2005; and the Office Action dated August 5, 2005.

Claims 1, 2, 4, and 5 stand rejected under 35 USC 103(a) as obvious over USP 5,076,467 (**Sugo**) in view of USP 2,437,963 (**Langmuir**) or USP 5,186,120 (**Ohnishi**), USP 6,072,937 (**Benade**), and USP 6,647,204 (**Hutchison**).

Claim 3 stands rejected under 35 USC 103(a) as obvious over **Sugo** in view of **Langmuir** or **Ohnishi**, **Benade**, **Hutchison**, and USP 5,803,938 (**Yamaguchi**).

Applicant respectfully traverses the above rejections of claims 1-5.

In Figure 4, the electromagnetic valve 2 is depicted in the “closed” state. In Figure 5, the electromagnetic valve 2 is depicted in the “open” state.

Figure 4 shows that, when the electromagnetic valve 2 is in the “closed” state, steam travels through steam passage 35 up toward the electromagnetic valve 2. Then steam travels through the steam inflow passage 41, into the inner space 44 of the electromagnetic valve 2, and then the steam travels out through the return pipe 38. Here, the steam circulates through the electromagnetic valve 2 and around the valve main body 45 because the valve main body 45 is in a “downward” position (as shown in Figure 4). When the valve main body 45 is in that “downward” position, this allows the inner space 44 to extend on the right side, top side, and left side of the valve main body 45 for steam circulation through inner space 44. Here, the steam does not travel out through steam outflow passage 42 or connecting tube 4 because the electromagnetic valve 2 is in the “closed” state and thus the steam outflow passage 42 is blocked by the valve main body 45. Information regarding these aspects of the subject invention are described in the original disclosure (for example, page 10 at lines 8-12, page 17 at lines 5-8).

Figure 5 shows that, when the electromagnetic valve 2 is in the “open” state, steam travels through steam passage 35 up toward the electromagnetic valve 2. Then steam travels through the steam inflow passage 41, out through the return pipe 38, and also out through the steam outflow passage 42 and connecting tube 4. Here, the valve main body 45 is in an “upward” position (as shown in Figure 5). When the valve main body 45 is in that “upward” position, the inner space 44 does not extend on the top side of the valve main body 45. Here, steam travels out through connecting tube 4 via the steam outflow passage 42 because the electromagnetic valve 2 is in the

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“open” state. Information regarding these aspects of the subject invention are described in the original disclosure (for example, page 10, lines 13-17).

**Sugo, Langmuir, Benade, Hutchison, Ohnishi, and Yamaguchi**, alone or in combination, fail to describe, teach, or suggest the following features set forth in claim 1: "a heating steam circulation passage, disposed in the electromagnetic valve, conveying the steam from the steam-generating portion through the electromagnetic valve and then to a return pipe, preliminarily heating an inside of the electromagnetic valve with the steam from the steam-generating portion when the electromagnetic valve is in a closed state", in combination with the other claimed features.

**Sugo, Langmuir, Benade, Hutchison, Ohnishi, and Yamaguchi**, alone or in combination, fail to describe, teach, or suggest the following features set forth in claim 4, as amended: "a return pipe receiving steam from the electromagnetic valve when the electromagnetic valve is in both the closed and open state, ... wherein, when the electromagnetic valve is in the closed state, steam circulates from the steam-generating portion through the heating steam circulation passage and around the valve main body and to the return pipe", in combination with the other claimed features.

Thus, Applicant respectfully submits that the above rejections of claims 1-5 should be withdrawn.

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In view of the aforementioned amendments and accompanying remarks, all claims currently being examined are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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